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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,476	10/04/2000	Jian Ma	796.373USW1	7526

32294 7590 06/07/2004

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TYSONS CORNER, VA 22182

EXAMINER

LEVITAN, DMITRY

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 06/07/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/679,476

Applicant(s)

MA, JIAN

Examiner

Dmitry Levitan

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-31 and 34-40 is/are rejected.
- 7) ☒ Claim(s) 32 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4 and 6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

Art Unit: 2662

Amendment, filed 10/04/00, has been entered. Claims 21-40 remain pending.

***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Drawings***

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21, 34, 35 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunt (US 6,151,300).

Hunt substantially teaches the limitations of claims 21, 35 and 40:

A method a network and a node for controlling overload in a packet switched network comprising traffic sources, traffic destinations and network nodes (Fig. 1 and 3:1-17), comprising

Art Unit: 2662

Sending data units from traffic source to traffic destination/selecting connection (from host C to host D on Fig. 1 and 3:1-4);

Sending an acknowledgement from the destination to the source, if a data unit is received correctly at the destination (ACKs 4:1-9, extending flow control from destination to the source);

Transmitting duplicate acknowledgements in the direction of the traffic source, when the traffic load is too high (creating duplicate ACKs 8:48-65).

Hunt does not teach measuring load level in a node and comparing it with a predetermined threshold.

Official notice is taken that measuring load level in a node and comparing it with a predetermined threshold is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add measuring load level in a node and comparing it with a predetermined threshold to the system of Hunt to improve the system congestion control.

In addition regarding claim 35, Hunt teaches nodes interconnected with transmission lines (Fig. 3), user terminals connected to the nodes (hosts A-D on Fig. 3) and duplicating means (inherently part of the system, because Hunt teaches creating duplicate ACKs).

In addition regarding claim 40, Hunt teaches buffering means for buffering data packets and acknowledgement packets traveling through the node (buffer pool on Fig. 4 buffering data and flow control/ACK packets).

Regarding claims 22 and 36, Hunt teaches a node generating the duplicate ACKs where the load level is measured (Ingress IED generating TCP headers/ACKs 3:57-63).

Art Unit: 2662

Regarding claims 23 and 24, Hunt teaches measuring the load level in one network node (host D connected to a LAN as shown on Fig. 3 and 3:33-39) and generating duplicate acknowledgements in an access node (Ingress IED of ATM network on Fig. 3 and 8:48-65).

Regarding claims 26, 27 and 30, Hunt teaches generating duplicate messages by modifying/copying the contents of incoming ACKs (8:48-60) and transmitting the messages as long as the measured traffic load is higher the threshold (matching the requirements of the destination 7:20-24).

Regarding claims 28, 29 and 31, Hunt teaches generating a predetermined number of duplicate ACKs when the load level is higher than the threshold (to generate ACKs as necessary to reduce the window 7:41-61 and inherently repeat ACKs if the window is too big, because sending ACKs is the only method of window control in the system) and discarding a corresponding number of ACKs from the destination (inherently part of the system, because Hunt teaches restricting ACKs from the designation host 8:66-67 and 9:1-10).

Regarding claims 37 and 38, Hunt teaches a node as an access node (IEDs on Fig. 3 and 5:35-53) and switching IP packets (using TCP/IP 2:6-16).

Regarding claims 25 and 39, Hunt substantially teaches the limitations of parent claims 24 and 35, including using ATM network.

Hunt does not teach transporting the load information in RM cells.

Official notice is taken that transporting information in RM cells is well known and expected in the art.

Art Unit: 2662

It would have been obvious to one of ordinary skill in the art at the time the invention was made to transport the load information in RM cells in the system of Hunt to utilize well known existing ATM transport method.

***Allowable Subject Matter***

4. Claims 32 and 33 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hunt	US006151300A	Method and apparatus for enabling flow control.
Ramakrishnan	US005974028A	System and method for improving transport protocol.
Packer	US006038216A	Method for explicit data rate control.
Robles	US006359882B1	Method and apparatus fro transmitting data.
Davis	US006105064A	System for placing packets on network for transmission at times determined by window size.
Wesley	US006076114A	Method, systems and computer product for transmission over communication networks.
Aubert	US006167027A	Flow control technique for X.25 traffic in high speed packet switching network.

Art Unit: 2662

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is 703-305-4384. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dmitry Levitan  
Patent Examiner.  
05/25/04.



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